

FANSTEEL/FMRI SITE REMOVAL OPTIONS IDENTIFIED
(see attached Figure for locations)

- Former Pond 2 - The open trench had the highest gamma readings noted during the July 2019 survey (45X background). Using a planning task order to evaluate making this location a temporary repository for all on-site radioactive material. Evaluation includes suitability of this site compared to others on-site; likelihood of inundation and or damage from flooding; potential to use in-situ treatments to reduce isotope mobility (like lime for example); and protection of groundwater and surface water and other factors.
- Sodium Reduction Building - Contains 1000-2000 one ton “supersacks” of soil contaminated with isotopes of uranium and thorium. The way the bags are stacked, and the potential condition of the bags will need to be evaluated before a plan to sample or move them can be created. ODEQ staff have expressed concern regarding tornadic activity at the site dispersing contents of sacks. Currently using a planning task order to evaluate:
 - Safety of material at its current location; do we need any engineering controls (results expected within the month)
 - Moving material to a temporary on-site repository at the most suitable location as determined by the results of the planning task order (cost estimate expected within the month)
- Soil Stockpile - This soil was collected from french drains around now closed ponds. The July 2019, gamma survey indicated 27X background gamma radiation. The stockpile is covered above and below with an HDPE liner. Options:
 - Cover old liner with sand to smooth and cover all with new upper HDPE liner (estimated cost \$68,000 - \$80,000)
 - Determine if this soil is suitable to close the existing open trench at the Former Pond 2; making that a defacto temporary on-site repository (cost estimate expected within the month)
 - Ship off-site for disposal (cost estimate expected next week)
- Gamma Anomalies at Pond 6 and outside Sodium Reduction building - Using planning task order to evaluate source of gamma radiation and develop plan to move radioactive isotopes to on-site repository at the most suitable location as determined by the results of the planning task order.
- Groundwater and Surface Water Treatment - The facility uses a trench and sump treatment system to capture groundwater from an unconfined alluvial aquifer. The system captures approximately 14,000 gallons per day (gpd). The system is designed to treat metals only and treatment is by manual addition of lime to raise pH and drop metals into several settling ponds set in series. In addition, the facility is under order from the NRC to treat surface and groundwater prior to discharge under a NPDES permit (NPDES Permit requirements attached). This treatment includes partially closed Pond 3 and its associated french drain (15,000 gpd). WIP has been removed from Pond 3. The pond still contains residual radioactive isotopes, chromium, cobalt, manganese, zinc and mercury. Currently using planning task order to evaluate:
 - Closing and capping Pond 3 to potentially reduce generation of contaminated groundwater;

- Evaluating whether treatment system is capturing chlorinated solvents and if so, is system adequate to treat them; and
- Upgrading antiquated manual treatment system.
- Preliminary results of study expected in